



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,624	09/12/2003	Hironori Masui	03500.017552	6137

5514 7590 11/10/2004

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

MORRISON, THOMAS A

ART UNIT PAPER NUMBER

3653

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,624

Applicant(s)

MASUI ET AL.

Examiner

Thomas A. Morrison

Art Unit

3653



– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/14/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "hitting portion is moved to a position in which said hitting portion does not hinder movement of the sheet during sheet feeding operation, while said hitting portion is moved to a position in which said hitting portion is projected to hit against the sheet moved by said aligning portion and hinder move of the sheet in the sheet feeding direction during sheet non-feeding operation", as recited in claim 8, must be shown or the feature(s) canceled from the claim(s). It is noted that Figs. 1, 2 and 4 appear to show that the hitting portion 2B is stationary. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of

the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 9 and 10 should be designated by a legend such as -- Prior Art -- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: (1) the specification appears to fail to provide antecedent basis for the recited "instructing portion" in claim 11.

Claim Objections

4. Claims 7, 8 and 11 are objected to because of the following informalities: (1) at least claims 7, 8 and 11 contain various grammatical errors. For example, "move" in claim 8 should be -- movement --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2, 8 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, this claim recites that there is **a** vibrating **member** for vibrating the bundle of sheets by repeatedly lifting at least **two** locations of a bottom portion of the bundle of sheets. However, Figs 1, 2 and 4 appear to show that two different vibration members are used to lift two locations of the bottom portion of the bundle of sheets. It is unclear how the recited "a vibrating member" can perform the lifting function set forth in claim 2.

Regarding claim 8, this claim recites that the "hitting portion is moved to a position in which said hitting portion does not hinder movement of the sheet during sheet feeding operation". However, Fig. 1 of the instant application appears to show that the hitting portion 2B is stationary. As such, it is unclear how the hitting portion 2B can move, as set forth in claim 8. Rather, it is noted that the specification discloses a shutter 4 that is retractably disposed in a document conveyance path.

Regarding claim 11, there is insufficient description of the structural relationship between the recited aligning portion and the recited instructing portion to perform the function set forth in claim 11. How does the instructing portion determine whether or not to execute a mode in which the sheets should not be fed after the aligning operation by the aligning portion? Also, it is unclear what is meant by the recited mode in which the sheets should not be fed after aligning operation. The fact that no prior art rejection has

been applied to claim 11 should not be considered to mean that claim 11 contains allowable subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nahar et al. In particular, Nahar et al. discloses all of the limitations set forth in claims 1-7 and 12.

Regarding claim 1, Nahar et al. discloses a sheet feeding apparatus (10) including a sheet supporting stand (20) arranged to support a bundle of sheets (D) in an erect posture;

an aligning portion (including R2, R4, R6) arranged to vibrate the bundle of sheets (D) upward and downward and move the bundle of sheets in a sheet feeding direction (top to bottom in Fig. 1) while supporting the bundle of sheets at at least two locations of said sheet supporting stand (i.e., sheets supported on R2, R4 and R6); and

a hitting portion (46) arranged to be hit against leading edges of the bundle of sheets (D) moved by the aligning portion (including R2, R4 and R6).

Regarding claim 2, Figs. 1 and 2 show that the aligning portion (including R2, R4 and R6) includes a vibrating member (including R2, R4 and R6) for vibrating the bundle

sheets (D) by repeatedly lifting least two locations of a bottom portion of the bundle sheets (bottom portion of sheets lifted by R2, R4 and R6). See also column 4, lines 1-7.

Regarding claim 3, Fig. 4 and column 4, lines 1-7 disclose that the vibrating member (including R2, R4 and R6) is a rotary member to be rotated in the sheet feeding direction (up to down in Fig. 1), and a height of a portion of said rotary member projecting from a surface of the sheet supporting stand (20) is adapted to change in accordance with a rotational angle of said rotary member (R2, R4 and R6).

Regarding claims 4 and 5, Fig. 4 shows that the rotary member (e.g., R2) has a shape that can be considered to be an eccentric cylindrical shape or a cam shape.

Regarding claim 6, the aligning portion (including R2, R4 and R6) is adapted to remain stationary in a position in which the aligning portion (including R2, R4 and R6) is retracted from the sheet supporting stand (20), or in a position in which a portion of the aligning portion (including R2, R4 and R6) projects from the sheet supporting stand (20), when the aligning portion (including R2, R4 and R6) does not align the bundle of sheets (D).

Regarding claim 7, Fig. 1 shows an aligning wall (14); and a pressure portion (F) arranged to thrust the sheets (D) against the aligning wall (14), during aligning operation of the aligning portion (including R2, R4 and R6), in which the pressure portion (F) is moved to a position in which the pressure portion (F) does not hinder the aligning operation of the aligning portion (including R2, R4 and R6).

Regarding claim 12, Fig. 1 shows a separating portion (including 44 and 48) arranged to separate the sheets (D) one by one from the bundle of sheets (D) after aligning operation by the aligning portion (including R2, R4 and R6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahar et al. as applied to claim 1 above, and further in view of Hsiao et al.

Nahar et al. discloses a sheet feeding apparatus having a hitting portion (46) arranged to feed articles to a conveyer, but does not specifically disclose a movable hitting portion as claimed.

Hsiao et al. discloses that it is well known to use a hitting portion (15 or 31) on a feeding apparatus, in which the hitting portion (15 or 31) is retractably disposed downstream in a feeding direction (right to left in Figs. 2A--3A and 4A-4D), and the hitting portion (15 or 31) is moved to a position in which the hitting portion (15 or 31) does not hinder movement of the article during the feeding operation (Fig. 2B), while the hitting portion (15 or 31) is moved to a position in which the hitting portion (15 or 31) is projected to hit against the article and hinder movement of the article (Fig. 2A) in the feeding direction during a non-feeding operation. It would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the hitting portion of Nahar

et al. according to Hsiao et al., in order to control the timing of feeding/non-feeding of sheets in the Nahar et al. sheet feeding apparatus.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahar et al. as applied to claim 1 above, and further in view of Muenchinger et al. Nahar et al. discloses a sheet feeding apparatus with a controlled motor (M2) that operates an aligning portion (including R2, R4 and R6), but it is unclear if the Nahar et al. motor control includes a setting portion.

Muenchinger et al. discloses a sheet feeding apparatus including an aligning portion (including 54 and 58), a sheet supporting stand (34, 36) and a motor (52) that is controlled such that the sheet feeding apparatus operates within a vibration frequency range (e.g., 1900-2800 rpm) and a vertical amplitude range (e.g., 0.5mm – 2.5mm) to vibrate sheets. See, e.g., Fig. 3 and column 2, line 57 to column 3, line 16. In other words, the Muenchinger et al. sheet feeding apparatus includes structure that controls the motor (52) to set the amplitude and frequency ranges, which can be considered to be a setting portion. It would have been obvious to one of ordinary skill in the art at the time of the invention, to include a setting portion on the Nahar et al. apparatus that controls the motor to set the frequency and amplitude ranges, as taught by Muenchinger et al.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahar et al. as applied to claim 1 above, and further in view of Kosugi.

Nahar et al. discloses a sheet feeding apparatus with a sheet supporting stand (20) and a controlled motor (M2) that operates an aligning portion (including R2, R4 and

R6), but it is unclear if any detecting portion and changing portion are used to operate the aligning portion (including R2, R4 and R6).

Kosugi discloses that it is well known to use a detecting portion (including sensors 15, 16 and 17) to detect an amount of bills (sheets) on a sheet support and a changing portion (including controller 111) that changes at least the operating time of a motor. See, e.g., column 4, line 31 to column 6, line 34. It would have been obvious to one of ordinary skill in the art at the time of the invention, to include a detecting portion and a changing portion on the Nahar et al. sheet feeding apparatus to control at least the operating time of the motor, as taught by Kosugi. Controlling the operating time of the motor (i.e., aligning portion operating time).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,973,038 discloses a sheet feeding device with a detector for detecting an amount of sheets and a changing portion.

U.S. Patent Nos. 4,973,037, 6,425,579 and 4,902,194 disclose sheet feeding devices with rotary members.


U.S. Patent No. 3,586,313 and Japanese Publication No. 5-85627 disclose sheet feeding devices with hitting portions.

U.S. Patent Nos. 4,789,148, 5,954,324 and 4,884,795, and European Publication No. 2141408 disclose feeding devices with supporting stands, aligning portions and hitting portions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is 703-305-0554. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on 703-306-4173. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600